Benchmark: Point 8528, Northing 1621955.641 & Easting 1121273.357, Cut "X" in concrete Median on IL Route 17 approximately 50' west of Existing Southbound Interstate 57 Structure 046-0007 over Illinois Route 17, Elev. 654.97 DESIGN SPECIFICATIONS 2017 AASHTO LRFD Bridge Existing Structure: None, Existing Interstate 57 is to be re-aligned. The traffic on existing Interstate 57 is to be shifted on a new alignment prior to wall construction. Design Specifications, 8th Edition Proposed Structure: The proposed wall for Ramp D will satisfy the Proposed and Future Lane Configurations for F.A.I. 57. For the Proposed Condition, F.A.I. Northbound and Southbound will consist of 2 lanes and 2 shoulders in each direction. This configuration will be constructed under this contract. At a future date, both Northbound and Southbound will be constructed to an Future Condition which will have an additional lane added. The location and DESIGN STRESSES height of the wall is set to accommodate both conditions. The wall shall be designed to accommodate loads for both the Proposed and Future FIELD UNITS Conditions. f'c = 3,500 psify = 60,000 psi (Reinforcement) No Salvage. fy = 50,000 psi (M270 Grade 50) **APPROVED** 577'-11'8" HIGHWAY CLASSIFICATION Measured along 116'-10" Tangent Drilled Shaft Wall 440'-7³8" Drilled Soldier Pile Wall F.A.I. Route 57 F.F. of wall Functional Class: Interstate FEB **2 1 2019** 30'-334 ADT: 28,000 (2016); 37,675 (2040) Expansion Joint DHV: 2.205 (2016): 2.636 (2040) AS A BASIS FOR Sta. 194+17.39 -Ramp D PI ADTT: 32% (2016): 28% (2040) Ramp D PC -- Sta. 195+02.81 Sta. 193+88.04 -Sta. 195+98.95 Ramp D PT -R-29 Bicycle Railing Elev. 676.02 Sta. 194+95.54 Elev. 677.08 PREPARATION OF DETAILED PLANS Design Speed: 75 m.p.h. Elev. 676.11 - F.A.I. 57 PT full length of Wall Elev. 676.11 Sta. 197+02.40 Posted Speed: 70 m.p.h. Elev. 677.14 Sta. 197+25.00 Elev. 674.76 2-Way Traffic Abutment Wing from Elev. 674.43 Directional Distribution: 49 (SB); 51 (NB) S.N. 046-0154 Finish Grade B.F. Top of Wall - Fnd Wall (See Structure Plans) Sta. 199+43.89 HIGHWAY CLASSIFICATION - Kink 2 - Kink 1 Elev. 670.04 Top of Bridge Berm-F.A.I. 57 Ramp D Sta. 193+84.61 Sta. 193+87.00 Functional Class: Ramp - Elev. 672.47 Elev. 670.47 Elev. 670.47 ► Elev. 671.68 ADT: 2,150 (2016), 3,185 (2040) ► Elev. 669.85 Existing Ground Line Elev. 672.45 DHV: 180 (2016), 248 (2040) Elev. 661.91 * Drilled Soldier Pile ADTT: 17% (2016), 17% (2040) Finish Grade (F.F.) Flev 669.26 (HP or W) typ. Design Speed: 35 m.p.h. * Pile Section, Spacing, tip elevation and shaft diameter Begin Wall Bottom of Concrete Facing -Posted Speed: 30 m.p.h. to be determined during final design. Sta. 193+66.52 1-way Traffic ► Elev. 662.77 ** For Proposed Condition at approximately Sta. 9+00.00 Elev. 661.28 Directional Distribution: 100 for Ramp D Finish Grade Slope off F.F. of wall begins **ELEVATION** to vary from 1:3 to 1:9.75 at Sta. 11+25.00 * Drilled Soldier Pile -HIGHWAY CLASSIFICATION (Looking at F.F. of Wall) ** For Future Condition at approximaely Sta. 9+00.00 for (HP or W) typ. Ramp D Finish Grade Slope off F.F. of wall begins to - Elev. 661.88 F.A.P. Rte. 330 (Illinois Rte. 17) vary from 1:3 to 1:3.40 at Sta. 11+25.00 Functional Class: Other Principal Arterial *** See Structures S.N. 046-0154 Plans for details. ADT: 15,200 (2016); 24,500 (2040) -30'-0" Precast Bridge Approach Slab *** **** See Roadway Plans DHV: 1,274 (2016): 1,869 (2040) Proposed € of F.A.I. 57 ADTT: 11% (2016): 17% (2040) -PT Sta 197+25.00 Design Speed: 35 m.p.h. 194+00 200+00 Posted Speed: 30 m.p.h. 2-Way Traffic -12'-0" Shidr. Directional Distribution: 57 (SB); 43 (NB) Limits of Conc. Slopewall *** Bk. Abut. -► P.G.L. of SB F.A.I. 57 -24'-0" Rdwy (SB) Direction of Traffic S.N. 046-0154 Drilled Soldier Pile _ ±65' Varies 1:50 to 1:25 Sta. 193+71.62 (HP or W) typ. -Project Location Elev. 679.64 $\triangleright B$ - ±22' Varies 1:25 to ±1:4 -12'-0" Shldr. ±1:4 Varies -- B.F. Wall Type B Gutter End Wall Sta. 199+43.89 ** \ Varying Slope 2'-7" Conc. Curb & Begin Wall -Kink 2 Gutter, Type M-4.24 Sta. 193+66.52 Sta. 195+02.81 Kankakee - Kink 1 Sta. 194+17.39 BH29 12+00 Varies 24'-0" BH27 10 +00 BH28 11+00 BH24 to 16'-0" Rdwy Direction of Traffic 8+00 7+00 6+00 Proposed & Ramp D LOCATION SKETCH 4 D Existing R.O.W. P Notes: GENERAL PLAN F.F. - Front Face. PLAN B.F. - Back Face. RETAINING WALL AT RAMP D For Expansion Joint Details & Wall Control Points see sheet 2 of 6. (SOUTHWEST RAMP ON I-57 OVER For Section A-A see sheet 2 of 6. For Section B-B see sheet 3 of 6. IL 17 AT SN 046-0154) For Section C-C see sheet 4 of 6. For Section D-D see sheet 5 of G. F.A.I. RTE. 57 - SEC. (46-3) HBK For Section E-E see sheet 6 of 6. KANKAKEE COUNTY Plan and Elevation views depict the lane configuration, slopes, and elevations for the Proposed Condition. Stations taken along Proposed & F.A.I. 57. See Wall Control Point Table for Offsets sheet 2 of 6. STATION 193+66.52 TO 199+43.89 Plan slopes and horizontal dimensions shown on the B.F. of the wall are at Rt. L's to F.A.I. 57 unless otherwise noted. <u>STRUCTURE NO.</u> 046-8805 Plan slopes and horizontal dimensions shown on the F.F. of the wall are at Rt. L's to B Ramp D unless otherwise noted. DESIGNED -CJE REVISED TOTAL SHEE SHEETS NO. SECTION LOCHMUELLER CHECKED ACS REVISED STATE OF ILLINOIS linais Design Firm Number 184.001670 57 KANKAKEE XX (46-3)HBK GROUP EDW REVISED **DEPARTMENT OF TRANSPORTATION** DRAWN PLOT SCALE = CONTRACT NO. 66863 S.N. 046-8805

SHEET NO. 1 OF 6 SHEETS

PLOT DATE = 2/12/2019

8:38:02 AM CHECKED -

CJF

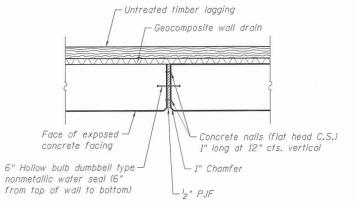
REVISED

WALL CONTROL POINTS

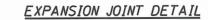
	Description	Station	Offset	Proposed Top of Wall Elev	Proposed Finished Grade Front Face Elev	Future Top of Wall Elev	Future Finished Grade Front Face Elev
	Begin Wall	193+66.52	78.21	661.84	661.28	661.84	661.28
	Top Bridge Berm	193+84.61	78.21	670.47	661.81	670.47	661.81
	Abut Wall Intersect Low	193+87.00	78.21	670.47	661.88	670.47	661.88
*	Abut Wall Intersect High	193+88.04	78.21	676.11	661.91	676.11	661.91
	Kink Point 1	194+17.39	77.72	676.02	662.77	676.02	662.77
	Kink Point 2	195+02.81	62.75	677.08	669.85	678.70	669.85
	PT FAI 57 (Hrz. Curve)	197+25.00	63.21	674.43	672.47	676.05	672.56
	End Wall	199+43.89	62.86	670.33	670.04	671.95	671.33

Stations & Offsets in table measured along front face of wall to Q of Proposed F.A.I. 57

Finished grade at front face Untreated timber THEM lagging Geocomposite wall drain Place 3₄" gap to allow for Concrete drainage, typ. facing Geotechnical filter fabric for french 1" Perforated drains drain pipe Drainage aggregate 1'-0"



DRAIN DETAILS BETWEEN SOLDIER PILES

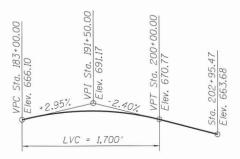


Finished grade at front face Untreated timber THE PARTY lagging = = 0 Soldier Pile (HP or W) Concrete Place 3₄" gap facing to allow for drainage, typ. =0 Geotechnical filter fabric for french drains 4" Perforated

DRAIN DETAILS AT SOLDIER PILES

drain pipe

1'-0"

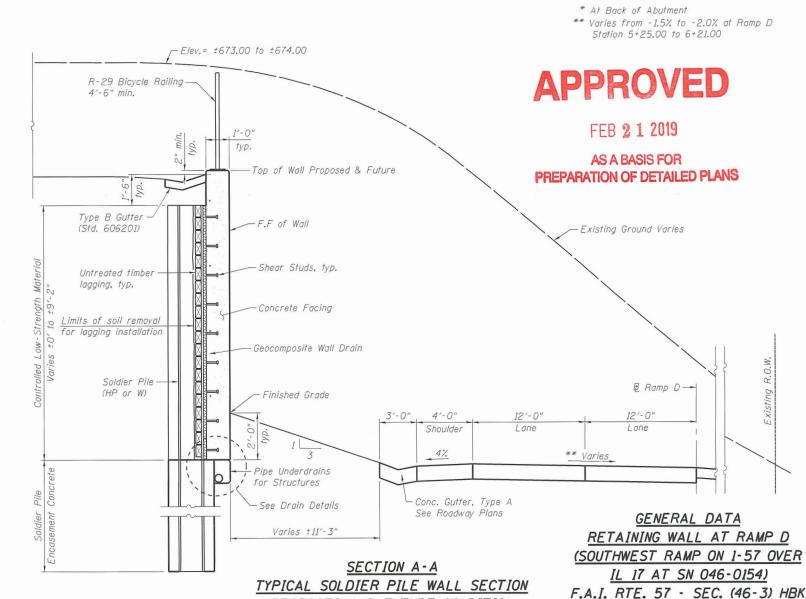


PROFILE GRADE (Proposed F.A.I. 57) (Stationing along & F.A.I. 57)

CURVE DATA

(Proposed F.A.I. Rte. 57)
(F.A.I. Route 57)
PI Sta. = 189+74.14
Δ = 2°52′07" (RT)
D = 0°11′28"
R = 30.000.00'
T = 751.18'
L = 1.502.04'
E = 9.40'
e = NC
T.R. = NA
S.E. Run = NA
PC Sta. = 182+22.96

PT Sta. = 197+25.00



PROPOSED AND FUTURE CONDITION

Wall Station 193+66.52 to 193+84.61

SHEET NO. 2 OF 6 SHEETS

(Looking South)

LOCHMUELLER
GROUP
1928 5rd Bradley N. 5mith Drive
Troy, N. 82294
PHONE: 613.65.01400

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

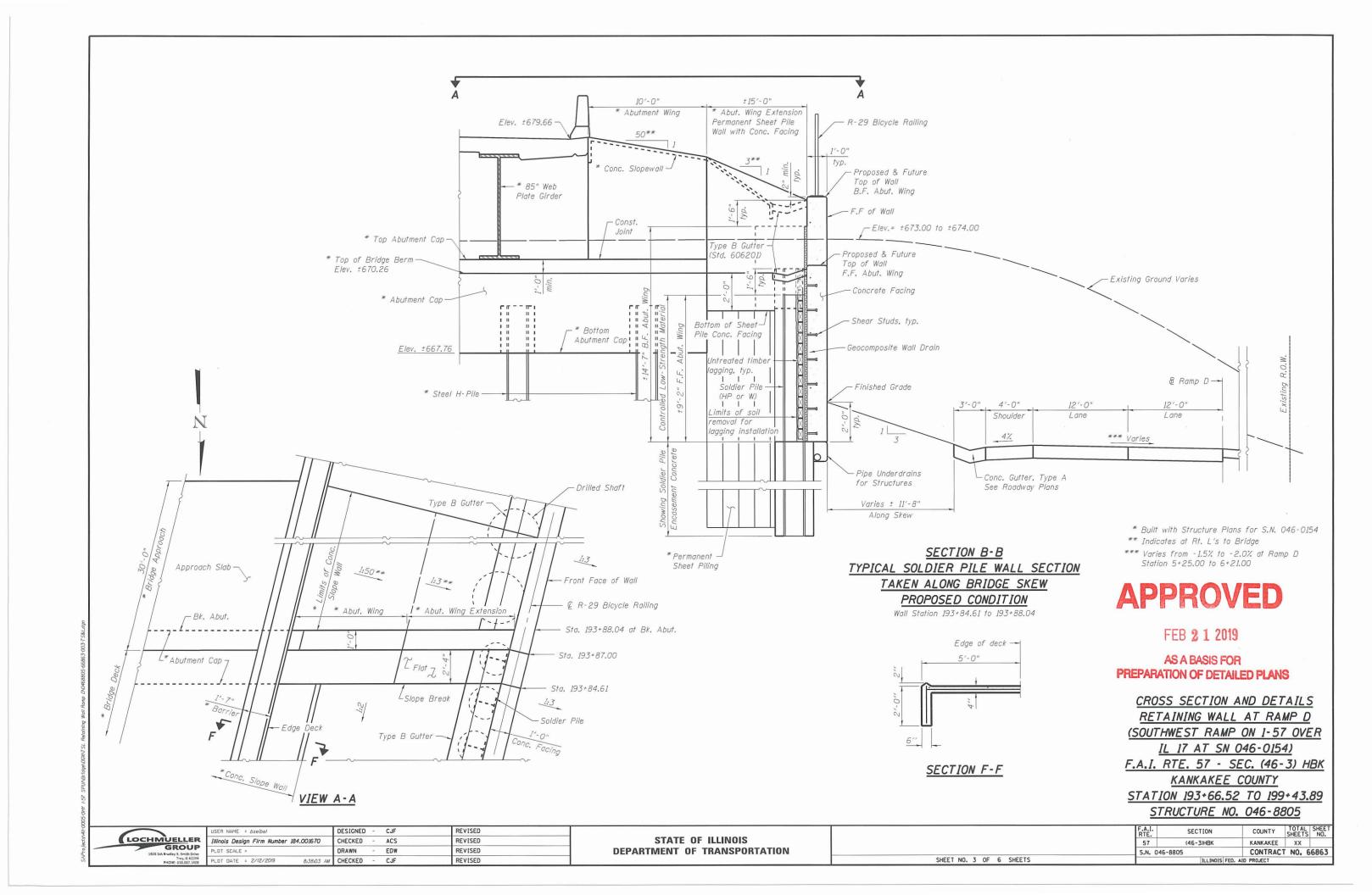
KANKAKEE COUNTY

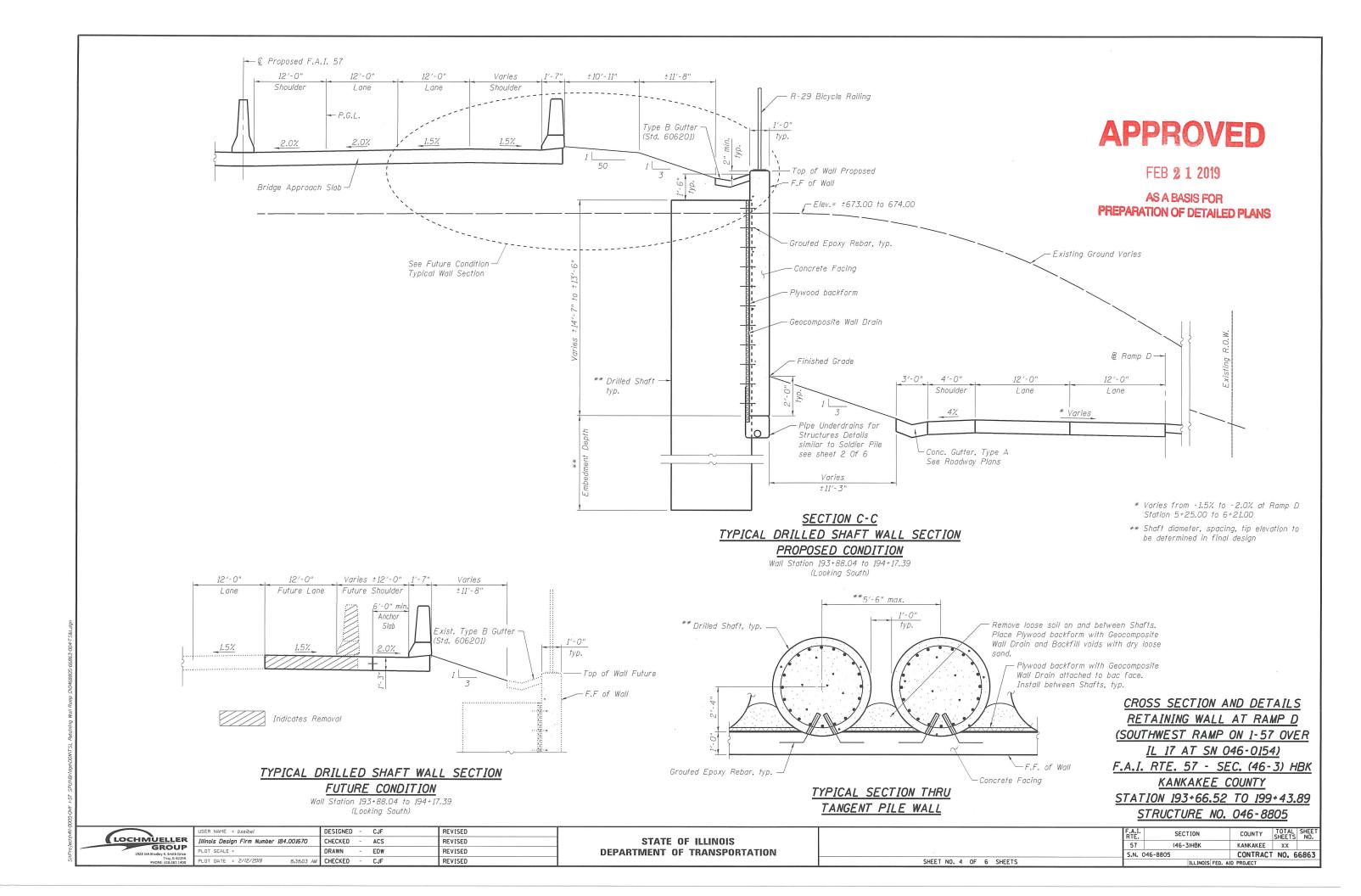
STATION 193+66.52 TO 199+43.89

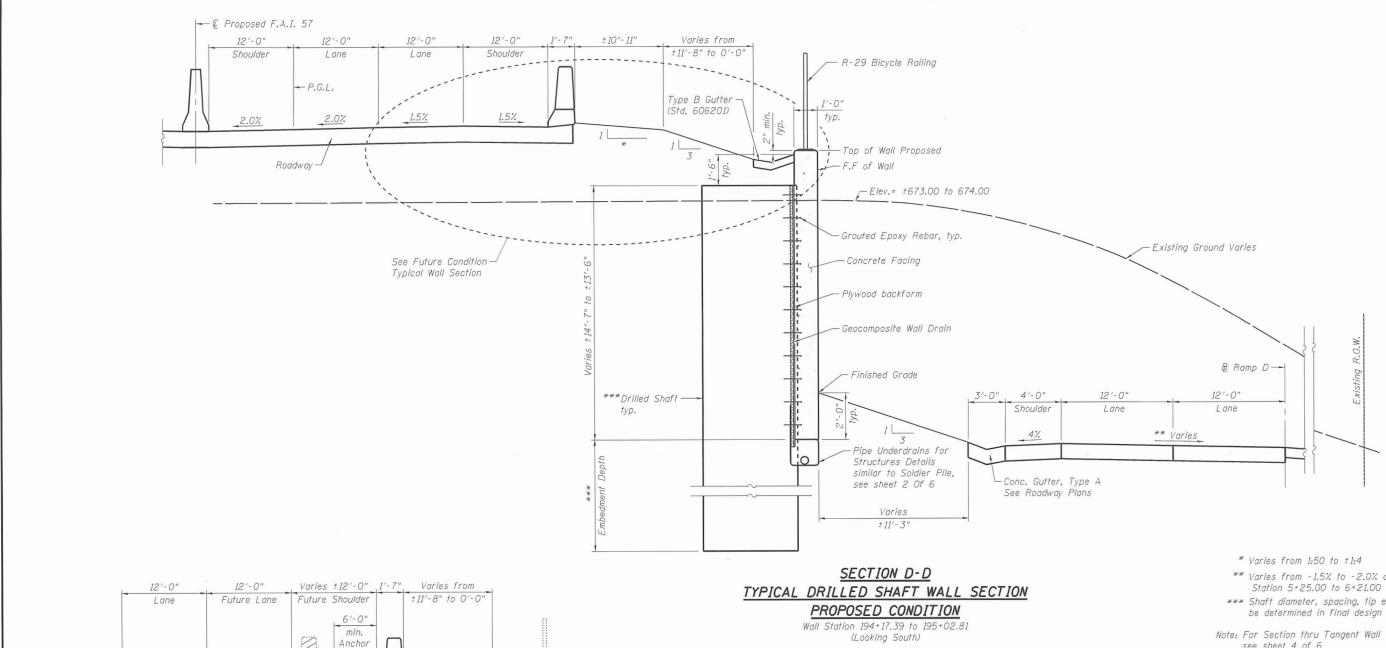
STRUCTURE NO. 046-8805

INBridge\DGNTSL Retaining Wall Ramp D\0468805-66863-002-T

rojecis\4II-0005-0HY I-57 SPUNBridge\DGMTSL







1'-0"

typ.

-Top of Wall Future

F.F of Wall

(Looking South)

- ** Varies from -1.5% to -2.0% at Ramp D
- *** Shaft diameter, spacing, tip elevation to

see sheet 4 of 6

APPROVED

FEB 2 1 2019

AS A BASIS FOR PREPARATION OF DETAILED PLANS

SHEET NO. 5 OF 6 SHEETS

CROSS SECTION AND DETAILS RETAINING WALL AT RAMP D (SOUTHWEST RAMP ON 1-57 OVER IL 17 AT SN 046-0154) F.A.I. RTE. 57 - SEC. (46-3) HBK KANKAKEE COUNTY STATION 193+66.52 TO 199+43.89 STRUCTURE NO. 046-8805

LOCHMUELLER

						_
	USER NAME = bseibel	DESIGNED	-	CJF	REVISED	
	Illinois Design Firm Number 184.001670	CHECKED	-	ACS	REVISED	
	PLOT SCALE =	DRAWN	-	EDW	REVISED	
	PLOT DATE = 2/12/2019 8:38:04 AM	CHECKED	-	CJF	REVISED	
_						

Slab

Varies from

2% to 4%

Exist. Type B Gutter (Std. 606201)

TYPICAL DRILLED SHAFT WALL SECTION

FUTURE CONDITION

Wall Station 194+17.39 to 195+02.81 (Looking South)

1.5%

Indicates Removal

1.5%

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

F.A.I. SECTION					COUNTY	TOTAL	SHEE NO.	
57					KANKAKEE	XX		
S.N. 046-8805					CONTRACT NO. 6686			
		ILLINOIS	FED.	AID	PROJECT			

